REMARKS/ARGUMENTS

Claims 1, 8, 10-11, 13 and 14 have been amended. Support for the amendment is found at specification page 1, lines 6-14. Support for new Claims 18-19 is found at specification page 7, lines 9-11 and page 13, lines 7-15. No new matter has been added.

The rejection of Claims 1-4, 6-10, 12, 15-17 under 35 U.S.C. 103(a) as being unpatentable over Warnes (2003/0022012) in view of Schaeffer (6,123,997)is traversed.

Warnes discloses an aluminide bondcoat. However, Warnes does not disclose "treating the surface of the substrate with a ceramic powder mainly having a crystal structure which is the same as that of alumina in the alpha crystal structure to form fine scratches on the surface of the substrate" as in amended Claim 1. Furthermore, the aluminide bondcoat of Warnes is thermally grown (See, Warnes, paragraph [0034]). On the contrary, the method as in amended Claim 1 deposits an alumina layer of alpha crystal structure on a substrate.

The secondary reference to Schaeffer does not cure the deficiencies of Warnes because Schaeffer does not disclose forming fine scratches on the surface of the substrate of and depositing an alumina layer of alpha crystal structure on a substrate amended Claim 1.

Therefore, Warnes in combination with Schaeffer cannot make obvious present Claim 1 and the claims dependent therefrom.

Additionally, both Warnes and Schaeffer carry out the coating at a high pressure. In detail, the coating of Warnes is carried out at a pressure of 150 torr ($\approx 2\times10^4$ Pa) (See, Warnes, Page 3, paragraph [0026]) and the oxidation in Schaeffer is carried out at a pressure of from 7 to 103 MPa (See, Schaeffer, Col.5, lines 34-48).

On the contrary, the alumina film of the present application may be formed at a low pressure of 0.75 Pa (See, specification page 13, lines 7-15, and new Claim 19).

Furthermore, Warnes emphasizes that "[t]he optimum fully transformed alpha alumina layer cannot be formed during the EB-PVD pre-heat cycle, or any other thermal

process at reduced oxygen pressure and temperature below 1950 degrees F" (See, page 4, paragraph [0042]). Schaeffer also discloses that a temperature of at least 2000°F is required to produce an alumina scale of at least 90% α-alumina coating (see, Col.6, lines 1-9).

On the contrary, Applicants teach, in one embodiment, depositing the alumina film mainly in alpha crystal structure at a temperature of 650 to 800°C (1202-1472°F) on the substrate (See, specification page 12, and Claim 13 and new Claim 18).

Applicants respectfully note that MPEP 2141.02 VI describes, in part, that "A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." Applicants submit that the Office has failed to consider Warnes as a whole, and that if Warnes is considered as a whole, as described above, Warnes even in combination with Schaeffer, does not enable one of ordinary skill in the art to carry out a method as in present Claim 1.

Withdrawal of the rejection is respectfully requested.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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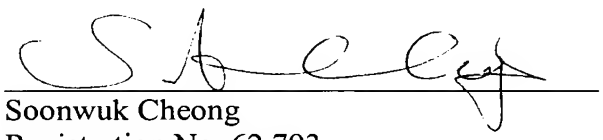

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